



SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
07/586,534	09/21/90	SCHIMMEL	MIT 3251

VERIFIED EXAMINER

 PATREA L. PABST
 KILPATRICK & CODY
 100 PEACHTREE STREET, STE. 3100
 ATLANTA, GA 30303

ART UNIT	PAPER NUMBER
187	3

DATE MAILED: 07/16/91

 This is a communication from the examiner in charge of your application.
 COMMISSIONER OF PATENTS AND TRADEMARKS

- ☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.
 A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
 Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1 - 13 are pending in the application.
- Of the above, claims _____ are withdrawn from consideration.
- _____ have been cancelled.
2. ☐ Claims _____ are allowed.
3. ☐ Claims _____ are rejected.
4. ☒ Claims 1 - 13 are objected to.
5. ☐ Claims _____ are subject to restriction or election requirement.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-848).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received; ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other _____

DOCKETED
BY: <u>LEP</u>
DATE DUE: <u>10/16/91</u>

Serial No. 07/586,534

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Art Unit 187

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-13 are rejected under 35 U.S.C. § 102(b) as being anticipated by Miller et al, Nakai et al or Suhadolnik et al ('359 and '624).

All of the references are directed to inhibiting target RNA. In each reference, the sequence of the target nucleotide has been determined. "Determining the three-dimensional structure is an inherent consideration when preparing a binding (complimentary) polynucleotide. Note the examples.

The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to adequately teach how to make and/or use the invention, i.e. failing to provide an enabling disclosure.

Applicant describes in general terms what should be done but

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Art Unit 187

the reaction conditions: solutions, pH, buffer, proportions, etc. are not given. See Example 1. Some processes are given by references to publications. This is not proper.

The incorporation of essential material by reference to a foreign application or foreign patent or to a publication inserted in the specification is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or applicant's attorney or agent, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. *In re Hawkins*, 486 F.2d 569, 179 USPQ 157; *In re Hawkins*, 486 F.2d 579, 179 USPQ 163; *In re Hawkins*, 486 F.2d 577, 179 USPQ 167.

Claims 1-13 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

YARBROUGH:ew
July 11, 1991
(703) 308-0196

AMELIA BURGESS YARBROUGH
PRIMARY EXAMINER
ART UNIT 187

PTO - 948
(Rev. 8-82)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTACHMENT TO
PAPER NUMBER

S.N.:

1 586534

GROUP 1807

PTO draftsmen now review both
formal and informal drawings.

The examiner will require

submission of formal drawings

at the appropriate time.

NOTICE OF PATENT DRAWINGS OBJECTION

Drawing Corrections and/or new drawings may only be
submitted in the manner set forth in the attached letter,
"Information on How to Effect Drawing Changes" PTO-1474.A. ☒ The drawings, filed on 9/21/90, are objected to as informal for reason(s)
checked below:

- | | |
|--|--|
| 1. <input type="checkbox"/> Lines Pale. | 11. <input type="checkbox"/> Parts in Section Must Be Hatched. |
| 2. <input type="checkbox"/> Paper Poor. | 12. <input checked="" type="checkbox"/> Solid Black Objectionable. |
| 3. <input checked="" type="checkbox"/> Numerals <i>Poor, small - must be at least 1/8" tall req'd.</i> | 13. <input checked="" type="checkbox"/> Figure Legends <i>Placed incorrectly poor</i> |
| 4. <input checked="" type="checkbox"/> Lines Rough and Blurred. | 14. <input type="checkbox"/> Mounted Photographs. |
| 5. <input type="checkbox"/> Shade Lines Required. | 15. <input type="checkbox"/> Extraneous Matter Objectionable.
[37 CFR 1.84 (1)] |
| 6. <input type="checkbox"/> Figures Must be Numbered. | 16. <input checked="" type="checkbox"/> Paper Undersized; either 8 1/2" x 14",
or 21.0 cm. x 29.7 cm. required. |
| 7. <input type="checkbox"/> Heading Space Required. | 17. <input type="checkbox"/> Proper A4 Margins Required:
<input type="checkbox"/> TOP 2.5 cm. <input type="checkbox"/> RIGHT 1.5 cm.
<input type="checkbox"/> LEFT 2.5 cm. <input type="checkbox"/> BOTTOM 1.0 cm. |
| 8. <input type="checkbox"/> Figures Must Not be Connected. | 18. <input checked="" type="checkbox"/> Other: |
| 9. <input type="checkbox"/> Criss-Cross Hatching Objectionable. | |
| 10. <input type="checkbox"/> Double-Line Hatching Objectionable. | |

B. ☒ The drawings, submitted on 9/21/90, are so informal they cannot be
corrected. New drawings are required. Submission of the new drawings MUST be
made in accordance with the attached letter.

- Remove "Figure 1"
"Figure 2A and 2B"
"Figure 4"

FORM PTO-892 (REV. 3-78)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		SERIAL NO. 586,534	GROUP ART UNIT 187	ATTACHMENT TO PAPER NUMBER 3		
NOTICE OF REFERENCES CITED				APPLICANT(S) Schimmel				
U.S. PATENT DOCUMENTS								
	DOCUMENT NO.	DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE		
A	4464359	8/84	Suhndelink et al.	424	150			
B	4757055	7/88	Miller et al.	514	44			
C	4898418	2/90	Nakai et al.	435	69.1	12/19/85		
D	4924624	5/90	Suhndelink et al.	47	55	10/22/87		
E								
F								
G								
H								
I								
J								
K								
FOREIGN PATENT DOCUMENTS								
	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUB-CLASS	PERTINENT SHTS. DWG.	PP. SPEC.
L								
M								
N								
O								
P								
Q								
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)								
R								
S								
T								
U								

Sheet 1 of 5

FORM PTO-1449 (REV. 7-80) MATERIAL INFORMATION STATEMENT <i>(Use several sheets if necessary)</i>	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. MIT5261	SERIAL NO. 07/586,534
	APPLICANT Paul R. Schimmel		
	FILING DATE September 21, 1990	GROUP 187	

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA						
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	AL							
	AM							
	AN							
	AQ							
	AP							

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	✓	von der Haar, VonFriedrich et al. <u>Angew Chem.</u> 93:250-256 (1981)
AS	✓	Brierley, Ian, et al. <u>Cell</u> 57:537-547 (1989)
AT	✓	Mei, Hounq-Yau, et al. <u>Proc. Natl. Acad. Sci.</u> 86:9727-9731 (1989)

EXAMINER

DATE CONSIDERED

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not

Sheet 2 of 5

FORM PTO-1449 (REV. 7-80)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MIT5261		SERIAL NO. 07/586,534	
MATERIAL INFORMATION STATEMENT (Use several sheets if necessary)				APPLICANT Paul R. Schimmel			
				FILING DATE September 21, 1990		GROUP 187	
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
BAR	<input checked="" type="checkbox"/>	Dreher, T.W., et al. <u>J. Mol. Biol.</u> 201:41-55 (1988)					
BAS	<input checked="" type="checkbox"/>	Jacks, Tyler, et al. <u>Cell</u> 55:447-458 (1988)					
BAT	<input checked="" type="checkbox"/>	Pleij, Cornelis, W.A., et al. <u>Nucleic Acids Research</u> 13:1717-1731					
CAR	<input checked="" type="checkbox"/>	Haenni, Anne-Lise, et al. <u>Progress in Nucleic Acid Research and Molecular Biology</u> 27:85-105					
CAS	<input checked="" type="checkbox"/>	Robertus, J.D., et al. <u>Nature</u> 250:546-551 (1974)					
CAT		Kim, S.H., et al. <u>Science</u> 185:435-440 (1974)					
DAR	<input checked="" type="checkbox"/>	Hou, Ya-Ming, et al. <u>Nature</u> 333:140-145 (1988)					
DAS	<input checked="" type="checkbox"/>	Park, Soon Jae, et al. <u>Biochemistry</u> 28:2740-2746 (1989)					
DAT	<input checked="" type="checkbox"/>	Francklyn, Christopher, et al. <u>Nature</u> 337:478-481 (1989)					
EAR	<input checked="" type="checkbox"/>	Hou, Ya-Ming, et al. <u>Biochemistry</u> 28:6800-6804 (1989)					
EAS	<input checked="" type="checkbox"/>	Schimmel, Paul <u>Biochemistry</u> 28:2747-2759 (1989)					
EAT	<input checked="" type="checkbox"/>	Hou, Ya-Ming, et al. <u>Trends in Biochemical Sciences</u> 14:233-237 (1989)					
EXAMINER				DATE CONSIDERED			
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Sheet 3 of 5

FORM PTO-1449 (REV. 7-89)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MIT5261	SERIAL NO. 07/586,534
MATERIAL INFORMATION STATEMENT (Use several sheets if necessary)				APPLICANT Paul R. Schimmel	
				FILING DATE September 21, 1990	
				GROUP 187	
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)					
	FAR	✓	Schimmel, Paul Cell 58:9-12 (1989)		
	FAS	✓	Endo, Yaeta, et al. The Journal of Biological Chemistry 265:2216-2222 (1990)		
	FAT	✓	Von der Haar, Friedrich et al. Chemical Abstracts 94:346 No. 197448x (1981)		
	AR				
	GAS	✓	Park, Soon Jae, et al. The Journal of Biological Chemistry 263:16527-16530		
	GAT	✓	Roberts, Stanley M., ed. Molecular Recognition: Chemical and Biochemical Problems; CRC Press, 1989		
	HAR	✓	Rebek, Jr., Julius, Science 235:1478-1484 (1987)		
	HAS	✓	Rebek, Jr., J., et al. J. Am. Chem. Soc. 109:2426-2431 (1987)		
	HAT	✓	Rebek, Jr., Julius, et al. J. Am. Chem. Soc. 107:6736-6738 1985)		
	IAR	✓	Askew, Ben, et al. J. Am. Chem. Soc. 111:1082-1090 (1989)		
	IAS	✓	Lewis, R.A., et al. Proc. R. Soc. Lond. 236:125-140 (1989)		
	IAT	✓	Lewis, R.A., et al. Proc. R. Soc. Lond. 236:141-162 (1989)		
EXAMINER				DATE CONSIDERED	
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.					

Sheet 4 of 5FORM PTO-1449
(REV. 7-88)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

MIT5261

SERIAL NO.

07/586,534

MATERIAL INFORMATION STATEMENT

(Use several sheets if necessary)

APPLICANT

Paul R. Schimmel

FILING DATE

September 21, 1990

GROUP

187

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

JAR	<input checked="" type="checkbox"/>	Yokoyama, Masayuki, et al. <u>Chemical Abstracts</u> 109:79550 No. 79541c (1988)
JAS	<input checked="" type="checkbox"/>	Itai, Akiki, <u>Chemical Abstracts</u> 108:398 No. 62280y (1988)
JAT	<input checked="" type="checkbox"/>	Badger, John, et al. <u>J. Mol. Biol.</u> 207:163-174 (1980)
KAR	<input checked="" type="checkbox"/>	McKinlay, et al. <u>Ann. Rev. Pharmacol. Toxicol.</u> 29:111-122 (1989)
KAS	<input checked="" type="checkbox"/>	Perry, N.C., et al. in <u>QSAR: Quantitative Structure Activity Relationships in Drug Design</u> , Alan R. Liss, Inc. pp. 189-193 (1989)
KAT	<input checked="" type="checkbox"/>	Ripka, William <u>New Scientist</u> 54-56 (June 16, 1988)
LAR	<input checked="" type="checkbox"/>	Rouvinen, Juba, et al. <u>Acta Pharmaceutica Fennica</u> 97:159-166 (1988)
LAS	<input checked="" type="checkbox"/>	Williams, et al. <u>J. Am. Chem. Soc.</u> 111:1090-1094 (1989)
LAT	<input checked="" type="checkbox"/>	Benzing, T., et al. <u>Science</u> 242:266-268 (1988)
MAR	<input checked="" type="checkbox"/>	Goodford, Peter <u>Chem. Abstracts</u> 111 No. 126283y (1989)
MAS	<input checked="" type="checkbox"/>	Weber, I., <u>Proteins: Structure, Function, and Genetics</u> 7:172-184 (1990)
MAT	<input checked="" type="checkbox"/>	Malim, M., et al. <u>Cell</u> 60:675-683 (1990)

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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FORM PTO-1449 (REV. 7-81)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MIT5261	SERIAL NO. 07/586,534
MATERIAL INFORMATION STATEMENT (Use several sheets if necessary)				APPLICANT Paul R. Schimmel	
				FILING DATE September 21, 1990	
GROUP 187					
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)					
NAR	<input checked="" type="checkbox"/>	Weber, I.T., et al. <u>Science</u> 243:928-931 (1989)			
NAS	<input checked="" type="checkbox"/>	Jones, T. Alwyn, et al. <u>The EMBO Journal</u> 5:819-822 (1986)			
NAT	<input checked="" type="checkbox"/>	Shi, Jian-Ping, et al. <u>Science</u> 29:3621 (1990)			
AR					
AS					
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AT					
EXAMINER			DATE CONSIDERED		
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.					